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Ontario Department of Education

Recommendations and Regulations

FOR

**THE ESTABLISHMENT, ORGANIZATION
AND MANAGEMENT**

OF

**Industrial, Technical, and Art Schools and
Departments**

IN

**HIGH AND CONTINUATION SCHOOLS, AND
COLLEGIATE INSTITUTES.**

THE INDUSTRIAL EDUCATION ACT

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO



TORONTO:

Printed by L. K. CAMERON, Printer to the King's Most Excellent Majesty

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INDUSTRIAL, TECHNICAL, AND ART SCHOOLS AND DEPARTMENTS

NOTE.—To avoid frequent repetition in the terms of the Regulations herein prescribed, certain powers are attributed to the Advisory Industrial Committee. It must, however, be borne in mind that under the provisions of *The Industrial Education Act* * some of said powers are exercised subject to the approval of the Minister of Education and of the School Boards concerned. See Sections 11, 15, and 16 of the Act.

DEFINITION OF NAMES

1. In *The Industrial Education Act* and the Regulations of the Department of Education, the name Industrial is applied to both day and night schools and classes for the preparation of workmen and workwomen; and the name, Technical, to those for the preparation of foremen and forewomen and the holders of minor directive positions in the trades. The Manual Training and Household Science of the High and Public School courses of study are classed as cultural and practical subjects whether they are taken up in day or night classes. They are introductory to Industrial and Technical courses, but are neither Industrial nor Technical themselves. The foregoing distinctions should be borne in mind.

PROCESS OF ESTABLISHMENT

2.—(1) The first step in the establishment of Industrial, Technical, and Art courses is the formation of an Advisory Industrial Committee. The members should be very carefully selected, as much of the success depends upon their efforts. It should be as representative as practicable of the different industries of the locality. The meetings should be held at stated times, at least monthly, at the school and not in an office down town. All the members should be workers and should not regard their duties as confined to attending the meetings. They should visit the classes regularly, inspect the registers, and take an interest in the work generally. They can also render useful and effective service among the people by advocating on every suitable occasion the training given in the classes. Where there are likely to be classes of girls and women it is advisable to appoint at least one woman on the Committee.

(2) The courses should be well but judiciously advertised. The object and character of these vocational courses should be brought to the attention of the parents and guardians, in particular, of all boys and girls of the Public and Separate Schools, who have at least the standing of Form IV and who do not intend to take the courses provided in the High Schools. Some days before the actual classwork begins a public announcement should be made that the Principal is ready to advise intending pupils and their parents and guardians as to the course of study best suited to the individual.

Suggestions for securing and maintaining an attendance and for the registration of pupils will be found in the forms given in Appendix A, which are in use in some of the Industrial, Technical, and Art Schools and Departments of the Province.

*For the convenience of those interested, *The Industrial Education Act* is given in full in Appendix C.

CONDITIONS OF ESTABLISHMENT

3. The establishment of a Day or Night* Industrial, Technical, or Art School under Section 4 of *The Industrial Education Act* may be approved by the Minister when it is shown to his satisfaction—

(1) That the school is so situated as to be readily accessible to pupils from the surrounding district;

(2) That there is a reasonable prospect of an adequate attendance of duly admitted pupils; and—

(3) That the Board has provided:

(a) An Advisory Industrial Committee as defined in Section 6 of *The Industrial Education Act*;

(b) Adequate and suitable accommodations and equipment as prescribed in Regulations 5 and 6;

(c) A staff adequate and suitable for the teaching of the subjects taken up, as prescribed in Regulation 8.

(d) A general organization in accordance with the regulations pertaining to the class of schools concerned.

ADMISSION QUALIFICATIONS

4. (1) Pupils duly admitted under the Regulations to a High School may be admitted to an Industrial or Technical High School or High School Course or a School or Course for instruction in the Fine and Applied Arts.

(2) (a) On the report of the Principal, approved by the Advisory Industrial Committee, applicants may be admitted to a General or Special Industrial school or Part-time Co-operative Industrial Course or a School or Course for instruction in the Fine and Applied Arts, provided they are of at least the standing of the Fourth Form of the Public and Separate Schools and are able to take up the courses selected.

(b) The report of the Principal shall be made after due enquiry, when practicable, from the Principal of the Public or Separate School as to the attainments and record of the candidate. Of the results of this enquiry, a record shall be kept in the School.

(3) Workmen or workwomen employed during the day may be admitted to an Industrial, Technical, or Art Night School.

ACCOMMODATIONS

5.—(1) The accommodations for industrial and technical day classes, where practicable, should be provided in a building or buildings separate from those used for other purposes. In such a building full provision should be made for classrooms, physical and chemical laboratories, a gymnasium, and workshops of various kinds depending upon the requirements of the municipality. Plans for all such buildings and for the modification of buildings already erected shall be submitted to the Minister of Education for approval before building operations are begun.

(2) A wide range of night classwork may be undertaken in any school building, especially when provision has been made in the accommodations and equipment for Household Science and Manual Training. The ordinary classrooms and laboratories are suitable for classes in academic and technical subjects.

(3) Art and mechanical drawing may be taught in a classroom by placing the drawing boards on the desks, but a suitable room provided with special tables is to be preferred.

*In this Circular the term Night School is used to include schools sometimes designated Evening Schools.

(4) Classes in millinery and dressmaking are best carried on in rooms in which there are no fixed desks or chairs. Where such rooms are not available, the assembly hall, the gymnasium, or the main halls of a building, when wide, may be utilized for the purpose. The furniture should consist of ordinary plain tables and chairs. In the dressmaking room, space should be provided for a sufficient number of sewing machines, one for about every five pupils in attendance at the class.

EQUIPMENT

6.—(1) No precise inventory of the machines and tools required for all the various forms of trade instruction which may be undertaken in night classes can be given because industrial and technical requirements are so varied that the equipment cannot be standardized in the same way as that for other forms of education. As far as practicable the equipment shall be that used for ordinary commercial work.

(2) A good High School or Public School equipment for Household Science (see pages 11-22, Circular No. 8, ¹³on Manual Training and Household Science) will be suitable for all forms of night class instruction in this subject.

(3) A well-equipped woodworking shop of a Manual Training Department (Circular No. 8, ¹³pages 23-29) provides fairly satisfactory accommodation for classes in building construction or cabinetmaking, where a limited range of work is undertaken. To provide for a more extensive course, power woodworking machinery, including a band saw, a circular saw, and a planer should be installed.

(4) The forge and machine shop equipment of a Manual Training installation provides for a beginning in machine shop practice. Where work is to be extended to the training of apprenticed machinists a more extensive equipment is necessary, consisting of additional lathes, a power drill press, a power-driven emery wheel for sharpening tools, a planer, a shaper, a universal milling machine, and a universal grinder, with a more complete equipment of bench tools.

ORGANIZATION AND MANAGEMENT

7.—(1) While the Advisory Committee will take a general oversight of the organization of the classes, it is important that they should be under the charge of a Principal who possesses both executive ability and general mechanical knowledge. The Principal should have full control of the industrial courses, subject to the Advisory Committee.

The appointment of such a Principal is all the more necessary when it is considered that the majority of the assistant teachers will be practical men and women from the shops with little or no experience in teaching and in solving the problems of the class-room. For these, the Principal's assistance and direction are indispensable. The Principal should keep in close touch with the factories and other industries in order that the instruction may meet the needs of the local industrial situation.

(2) The Principal should report monthly to the Committee. His report should show for each subject the number registered, the number in attendance and the average attendance and the percentage of the registered attendance. The registers should be kept and marked in ink. In the case of the night schools, they should show for each student the name, address, occupation, country of birth, age if a minor, and previous training. Every effort should be made to keep up the attendance. The cause of absence or discontinuance should, in every case, be sought for. In some schools reply cards are sent to absentees, but a much

better plan is to obtain the facts through personal inquiries by the teachers or members of the Committee. The names of persistent absentees who cannot account satisfactorily for their absence should not be retained on the register. Where fees are charged the Principal should be instructed to remit them, if in his judgment the financial condition of the student or his parents renders it advisable to do so. This will of course be done privately.

(3) After the organization of the Committee and the appointment of the Principal, a general investigation should be undertaken of the industries of the district, with the object of discovering the subjects most desirable and feasible, and the kind of instruction required by the employers and needed by the employees. At the same time employers should be urged to show a practical interest in the industrial classes, by granting certain privileges, bonuses, increases of wages, or promotion to employees taking satisfactory courses of instruction.

A very important development in connection with the trade schools of London, England, which is found also elsewhere in Europe, is the establishment of Voluntary After-care Committees, the members of which interest themselves in the pupils both while they are in attendance and especially after they have been successfully placed in work-shops. These committees obtain information as to the condition of workers in the various shops, give assistance to those who are seeking employment, and, whenever periods of apprenticeships are arranged, they take care that the interests of the boys and girls are carefully safe-guarded in the indentures. The responsibilities undertaken by these after-care committees might well be undertaken by the Advisory Industrial Committees of Ontario, especially in connection with local organizations for the same purpose.

(4) Every effort should be made to induce students to take up related courses of study rather than isolated subjects. Classes should be small. No class should exceed twenty; fifteen is a better number. No matter what system of classification is adopted, much of the instruction must be individual. In industrial work particularly, the more the individuality of the pupil is recognized and the more his special requirements are taken into consideration, the more regular will be his attendance and the more satisfactory will be the results.

(5) The classification of students should depend upon the age, the occupations, and the qualifications of those who apply for admission. The classes for men and women should, where possible, be distinct from those for boys and girls. Adults do not care to show their lack of knowledge or training before children. It is frequently necessary to organize even in the same subjects different classes for persons of different occupations. For example, the drawing or the mathematics (beyond the rudiments) required by the carpenter is different from that required by the machinist. No student should be admitted to a class who is unable through lack of preliminary training or other cause to take full advantage of the instruction offered.

(6) The methods of approaching subjects in the night voluntary classes should differ materially from those employed in the day schools. Students in the night classes have a tendency to become discouraged and to discontinue their attendance if they do not see, almost immediately, the bearing of the instruction on their daily work. In subjects with a practical bearing, such as mechanical drawing, mathematics, and science, they should not be kept working at preliminary plates, exercises, and problems which with their limited knowledge they cannot recognize as being of practical value. Work in all subjects should begin with shop problems of immediate use. The theoretical work necessary to the solution of the practical problems should at first be taught incidentally. After the student is

convinced of the applicability of the instruction to his needs he will be quite willing to make a special study of the principles on which the problems are based. Drawing should be taught more generally from specifications than from plans and plates, which require only copying to the same or a different scale.

The teacher should prepare a summary of each lesson in the form of type-written sheets or cards, which should be handed to the students at the close of the lesson. This method enables students who are unavoidably absent to keep up the continuity of the work and gives all an opportunity for review before the commencement of another session.

First and second year students should not be taught together, and no attempt should be made to take students over work a second time except in so far as a preliminary review is necessary.

(7) While night Industrial courses and night Public or Separate School courses or night High School courses may be held in the same building and at the same time, it is to be noted that these courses are under different management. To prevent a conflict of authority, the School Board should select the principal, who is to have charge of the parts of the accommodations and equipment in general use.

(8) It is to be noted also that while certain branches, such as arithmetic and bookkeeping, may be subjects of instruction in night Public or Separate Schools or night High Schools and also in night Industrial Classes, only those courses in which such branches are taught with a distinctively industrial bias are to be carried on under the authority of an Advisory Industrial Committee. For example, classes in general bookkeeping, typewriting, and stenography are not to be classified as industrial, but classes giving instruction either in the simple accounts required by mechanics, or in the more specialized forms of bookkeeping required by builders, contractors, or persons in other industrial occupations in estimating, cost accounting, etc., may be so classified.

QUALIFICATIONS OF STAFFS

8. The qualifications of the staffs shall be as follows:

(1) (a) For the academic subjects of the night schools a certificate approved by the Minister and held by teachers who have duly familiarized themselves with the industrial requirements of the district.

(b) For the academic subjects of the day schools, at least a First Class or High School Assistant's certificate, approved by the Minister, and held by teachers who have duly familiarized themselves with the industrial requirements of the district.

(2) (a) For the vocational subjects of both the day and the night schools, expert knowledge of the subjects which they are to teach, approved by the Minister.

Instructors in shop-work should be skilled mechanics; not only will such teachers give the necessary practical turn to the work, but they will command the confidence and sympathy of the pupils. In the selection of such experts, preference shall be given to those who, being otherwise qualified, are now engaged or have recently been engaged in the form of industry which they are to teach.

(b) For the theoretical and practical technical work, teachers specially trained at industrial or technical institutions.

DUTIES OF STAFFS

9.—(1) The head teacher of an Industrial, Technical, or Art School shall be called the Principal and the other teachers Assistants.

(2) The authority of the Principal shall be supreme in all matters of discipline in his own school.

(3) It shall be the duty of the Principal:

(a) To admit no pupil who has not been duly admitted as provided in Regulation 4.

(b) To admit no pupil who has been enrolled in another school, unless he presents a letter of honourable dismissal from the Principal thereof. In the event of a dispute, the parties thereto shall submit full particulars of the question to the Director of Technical Education.

(c) (i) To determine the number of Forms, the number of pupils to be assigned to each Form, and the order in which the subjects in each Form shall be taken up by the pupils.

(ii) To make such promotions from one Form to another as he may deem expedient.

(d) Subject to the Regulations to assign the subjects of the Courses of Study among the Assistants.

(e) (i) To bring under the notice of the Advisory Committee, parents, guardians, and pupils, from time to time as he may deem it expedient, such of the provisions of the Regulations as apply to them respectively.

(ii) When the school opens, and as often thereafter as may be necessary, the Principal shall duly explain to the pupils their duties, and the courses of study.

(f) To make, as far as practicable, suitable arrangements for the oversight and comfortable accommodation of those pupils of the Day Schools whom he has permitted to present themselves in the school building before 8.45 a.m., and of those whom he has permitted to remain in the school building during the noon recess or after the close of school; also for the supervision of the playgrounds during the recesses.

(g) To give assiduous attention to the health and comfort of the pupils, to the cleanliness, temperature, and ventilation of the school house, to the care of all maps, apparatus and other school property, to the preservation of shade trees and the orderly arrangement and neat appearance of the playgrounds, and to report promptly to the Advisory Committee and to the municipal health officer the appearance of any infectious or contagious disease in the school, or the unsanitary condition of the school house, outhouses, or surroundings.

(h) To refuse admission to the school of any pupil who he believes is affected with, or exposed to chicken pox, smallpox, cholera, glanders, scarlet fever, scarlatina, diphtheria, whooping cough, measles, mumps, or consumption, or other infectious or contagious disease, until furnished with a certificate of a medical health officer or of a duly qualified medical practitioner approved by him, that all danger from exposure to contact with such pupil has passed.

(i) To suspend any pupil guilty of persistent truancy, or persistent opposition to authority, habitual neglect of duty, the use of profane or improper language or conduct injurious to the moral tone of the school, and to notify the parent or guardian of the pupil, and the Advisory Committee, of such suspension; but the parent or guardian of any pupil suspended may appeal against the action of the Principal to the Advisory Committee, which shall have power to remove, confirm or modify such suspension.

(4) If a parent or guardian fails, after reasonable notice by the Principal, to pay the school fees of his child or ward, or to provide him with the text-books or other supplies required in his course of study or to pay the fees imposed for such

purpose by the Advisory Committee, the Principal shall notify the Advisory Committee promptly of such neglect, and the Advisory Committee may suspend the pupil, or it may itself provide him with such text-books and other supplies, and may exempt him from the payment of school and other fees.

(5) If a pupil injures or destroys school property the Principal shall report to the parent or guardian, and, if within a reasonable period, the parent or guardian fails to make good the damage, the principal shall submit the matter promptly to the Advisory Committee for settlement.

(6) When so requested, every Principal shall furnish the Minister and the Director of Technical Education with any information which it may be in his power to give respecting the condition of the school premises, the discipline of the school, the progress of the pupils, and any other matter affecting the interests of the school, and shall prepare such reports to the Advisory Committee as may be required by it.

(7) When the Principal in charge of an Industrial, Technical, or Art School has charge of more than one day or night school or course, he shall be called the Supervising Principal, and the duties and powers of the other Principals shall be subject to such modifications as may be made by the Advisory Committee with the approval of the Minister.

(8) The teachers of an Industrial, Technical, or Art Department in connection with a High or Continuation School or Collegiate Institute shall be subject to the authority of the Principal of such school as is set forth in Regulation 7 of the Continuation School and Regulation 10 of the High School Regulations, with such modifications as may be made by the Advisory Committee, with the approval of the Minister.

(9) (a) Every teacher of a day school should be in his place in the school at least fifteen minutes before the opening of the forenoon session and at least five minutes before the opening of the afternoon session.

(b) Every teacher of a night school shall be in his place at least ten minutes before the opening of the night session.

DUTIES OF PUPILS

10.—(1) (a) A pupil registered in a day or night school shall attend punctually and regularly.

(b) He shall be neat and clean in his person and habits, diligent in his studies, kind and courteous to his fellow pupils, obedient and respectful to the teachers, and shall in the case of a day school submit to such discipline as would be exercised by a kind, firm, and judicious parent. And in the case of a night school to such discipline as a judicious Principal may decide to be suitable.

(2) (a) (i) A pupil of a day school on returning to school after absence shall give the Principal from the parent or guardian, orally or in writing, as may be required by the Principal, the reason for his absence. If the reason is not satisfactory the Principal shall communicate with the parent or guardian, and, in the event of no satisfactory explanation, he may refuse the pupil admission thereafter, but, in that case, he shall submit the question forthwith to the Advisory Committee for final settlement.

(ii) A pupil of a night school on returning to school after absence shall give the Principal a satisfactory reason for such absence.

(b) A day pupil may retire from school at any hour with the consent of the Principal, or at the request, either oral or written, of his parent or guardian; a night school pupil, with the consent of the Principal. If, however, the Principal

has reason to believe that an unjustifiable use is being made of this privilege, and is unable to secure due amendment, he shall submit the question forthwith to the Advisory Committee for settlement.

(c) A day pupil shall be responsible to the Principal for his conduct on the school premises and on the way to and from school, except in the case of a day pupil, when accompanied by his parent or guardian or by some person appointed for this purpose by such parent or guardian.

SCHOOL TERMS AND SESSIONS

Day Schools

11. (1) Except with the special approval of the Minister, the school year of a day school shall consist of three terms; the first shall begin on the first Tuesday of September and end on the 22nd of December, the second shall begin on the third of January and end on the Thursday before Easter Day, and the third shall begin on the second Monday after Easter Day and end on the 29th of June.

(2) Every Saturday, every public holiday, and every day proclaimed a holiday by the Council of the Municipality in which the school is situate shall be a school holiday.

(3) (a) Unless otherwise approved by the Minister, the pupils shall assemble for study at nine o'clock in the forenoon, and shall be dismissed not later than four o'clock in the afternoon; but where practical work is emphasized in the programme, the hour for closing may be extended by the Advisory Committee to five o'clock.

(b) Such recesses at noon and during the forenoon and afternoon shall be allowed as the Board may approve; but in no case shall the number of school hours be less than five hours a day, including the recesses in the forenoon and afternoon.

Night Schools

12. (1) Subject to the approval of the Minister, the night school year shall consist of two terms beginning and ending on such dates and with such vacations as the Advisory Industrial Committee may determine.

(2) The school shall be open for at least an hour and a half of actual instruction on each of at least two evenings a week.

COURSES OF STUDY

Organization

13. The needs of the different localities vary so much that *The Industrial Education Act* leaves to the Advisory Committee the initiatory steps in the settlement of the courses. After the subjects have been selected a report upon the details should be submitted by the teacher in charge to the Advisory Committee, followed by due consideration by the Committee and the School Board, before submission to the Minister for his approval. The first year must, however, be more or less one of experiment especially in the case of the Night and Part-time Co-operative courses, and subject to such limitations as may be made by the Regulations, the courses may be modified from time to time in accordance with the experience of those concerned.

Night and Part Time Courses

Subjects

14.—(1) The list of subjects below is recommended as meeting the requirements of most industrial centres where there are Night or Part-time Courses; but in addition to these subjects, any other subject or subjects having a direct application to any of the local industries may be taken up with the Minister's approval.

(2) In localities where there are Night Commercial Classes, provision for Business English and the special Industrial Commercial subjects may be made in such classes or in the classes maintained by the Advisory Industrial Committee, provided that the latter classes are taken in addition to one or more of those detailed in I and II below, as the Committee may consider more convenient and economical.

Selection

(3) From the following lists, I and II, for boys and men and for girls and women respectively, each student shall take up such subject or subjects as he or she may select and as may be approved by the Principal. To the subject or subjects so selected, one or more of those included in list III may be added.

I Subjects for Boys and Men

Freehand drawing, mechanical drawing, architectural drawing, design, modelling.

Woodworking, metal working, electrical working, building construction, printing, plumbing, painting.

Physics, chemistry, mechanics.

Workshop mathematics, estimating, business English, industrial commercial work.

II Subjects for Girls and Women

Cookery, home economics.

First aid, home nursing.

Hand sewing, machine sewing, dressmaking, millinery, embroidery, laundry work.

Freehand drawing, design, colour harmony.

Business English, industrial commercial work, mathematics.

III Additional Subjects

English literature, history and civics, hygiene, physical culture, first aid.

GENERAL INDUSTRIAL DAY SCHOOLS

15.—(1) No day General Industrial course may be established that does not make provision for academic courses in literature, reading, history, geography, grammar, composition, mathematics, and science, as well as industrial work. Emphasis on the academic subjects is especially necessary where pupils are admitted before completing the work of Form IV of the Public and Separate Schools.

(2) With the Minister's approval, the number and the scope of the subjects in each year of the following courses may be reduced and the practical work of the courses may be emphasized, having regard in all cases to the capabilities and requirements of the pupils.

(3) Pupils may be admitted to one of the courses on the application of the parent or guardian, who shall state, where practicable, the occupation in life for which he wishes him to be prepared. Of this statement the Principal shall keep a record.

For Boys

(4) (a) The course for boys should extend over at least two years. It may extend over less time if local conditions so demand, but the longer period is greatly to be desired.

(b) When practicable and desirable, specialization should be permitted in the shop work at the end of the first year in accordance with the requirements of each locality, especially when Manual Training has been taken up in the Public and Separate Schools; or the shop work in wood should be continued, with or without metal work, as being the best basal preparation for most of the trades.

For Girls

(5) A two years' General Industrial course, followed by one or two years of a Special Industrial course, will be found to be sufficient for most girls, especially where Household Science forms part of their Public or Separate School course.

Special Day Courses

(6) Where practicable, Boards should establish a four years' course for boys—two of the General Industrial School and two of the Special or the Co-operative Industrial School—which should provide also some academic work. The General Industrial School would attract and retain the pupil from thirteen or fourteen till sixteen, the period when his growing power is greatest and his earning power is least, and would enable him to select, with the assistance of his parents or guardian, the industry for which he is best suited; but only a four years' course can produce the mental and physical training needed for a life of progression in industrial efficiency.

(7) As in the case of the boys, to the two years' Industrial Course may be added two years of a Special or Co-operative Industrial School, which should provide also some academic work.

Settlement of Courses

(8) Before being adopted, both the General and the Special Day Courses should be prepared for the Minister's approval by the Principal in charge, with the assistance of the Advisory Committee, and, in particular, of the Director of Technical Education.

Religious Exercises and Instruction

In Day Schools

16. (1) (a) Every Day School shall be opened with the reading of the Scriptures and the repeating of the Lord's Prayer, and shall be closed with the Lord's Prayer or the prayers authorized by the Department of Education; but no pupil shall be required to take part in any religious exercises objected to by his parent or guardian.

(b) (i) In schools without suitable waiting-rooms, or other similar accommodation, if the parent or guardian demands the withdrawal of a pupil while the religious exercises are being held, such demand shall be complied with and the reading of the Scriptures shall be deferred in inclement weather until the closing.

(ii) To secure the observance of this regulation, the teacher, before commencing a religious exercise, shall allow the necessary interval to elapse, during which the children or wards of those, if any, who have signified their objection may retire.

(c) If the parent or guardian objects to his child or ward taking part in the religious exercises, but directs that he shall remain in the school room during such exercises, the teacher shall permit him to do so, provided that he maintains decorous behaviour during the exercises.

(d) If, in virtue of his right to be absent from the religious exercises, any pupil does not enter the school room till the close of the time allowed for religious exercises, such absence shall not be treated as an offence against the rules of the school.

(e) When a teacher claims to have conscientious scruples in regard to opening or closing school as herein prescribed, he shall notify the Advisory Committee to that effect in writing; and it shall then be the duty of the Advisory Committee to make such provision as it may deem expedient for the carrying out of the requirements of (1) (a) above.

(2) (a) The Scriptures shall be read daily and systematically; the parts to be read may be taken from the book of selections adopted by the Department for that purpose, or from the Bible, or from the list of the Selected Scripture Readings of the International Bible Reading Association, as the Advisory Committee by resolution may direct.

(b) An Advisory Committee may also order the reading of such parts by both pupils and teachers at the closing of the school, the repeating of the Ten Commandments at least once a week, and the memorization of passages selected by the Principal from the Bible.

(c) If the Advisory Committee does not pass the resolution provided for in (a) above, the Principal shall make the selection himself, and shall promptly notify the Advisory Committee of his action. Such action may be revised by the Advisory Committee at any time thereafter.

(3) (a) A clergyman of any denomination shall have the right, and it shall be lawful for the Advisory Committee to allow him, to give religious instruction to the pupils of his own church, in each school house, at least once a week, after the hour of closing the school in the afternoon.

(b) Under the same conditions, a clergyman, selected by the clergymen of any number of denominations, shall also have the right to give religious instruction to the pupils belonging to such denominations.

(c) If the clergymen of more than one denomination apply to give religious instruction in the same school house, where the number of class-rooms is insufficient for all at the same time, the Advisory Committee shall decide on what day of the week a room shall be at the disposal of the clergyman of each denomination, at the time above stated.

(4) Emblems of a denominational character shall not be exhibited in the School during regular school hours.

GENERAL DAY SCHOOL SYLLABUS

17.—Subject to the foregoing regulations and to instructions that may be issued by the Minister from time to time the General Syllabus for the General Industrial Day Schools for Boys and Girls shall be as set forth below.

Subjects Common to all the Years

Manners and Morals

Instruction in moral principles and practice and in good manners, incidentally, from current events, from lessons in literature, history, etc., by suitable selection of supplementary reading, and by the teacher's own example, as well as by precept.

Physical Culture

The symmetrical development of the body, securing at the same time strength and grace, with correct and prompt obedience to the will.

A systematic course of exercises in drill and callisthenics, both free and with apparatus.

The course of instruction prescribed by the Regulations of the Department of Militia and Defence where a Cadet Corps is maintained.

INSTRUCTIONS: 1.—When the weather and the accommodations permit, the course in Physical Culture shall be taken up systematically at least an hour and a quarter every week in each year throughout the course.

2.—No pupil shall be exempted from the course in Physical Culture except upon a medical certificate, or on account of evident physical disability, or for other reason satisfactory to the Principal.

3.—Subject to the report of the Director, in all the years the sexes shall be separately trained.

4.—When the weather permits the Principal may substitute each week, for not more than half the time prescribed above for Physical Culture, suitable sports and games, in which all the members of a class shall take part, and which shall be under the supervision of the members of the staff.

Hygiene

Fresh air and ventilation; disease germs; breathing; bad effects of dust; pure and impure water; care of the skin, the nose, the throat, the ears, and the teeth; foods and digestion; the bones and muscles; the nervous system; clothing; exercise out of doors; value of cleanliness; work and recreation; the effects of stimulants and narcotics; first aid, bleeding, fainting, asphyxiation, drowning, etc.

Courses for Boys

FIRST YEAR

Shopwork

Elementary Woodwork.—Reading of working drawings; typical problems in construction, including the principal joints used in carpentry and joinery; elementary cabinet-making and joinery; woodturning.

Designing, constructing, assembling, and finishing of one or more pieces of furniture.

Use, construction, and care of tools.

Kinds of wood and their properties; cutting and seasoning of lumber; prevention of checking and warping.

Staining, varnishing, and waxing.

INSTRUCTIONS: 1.—The Workshop Practice differs from the Primary School Manual Training in having a definite industrial outlook, and, accordingly, in requiring a larger apportionment of time. An hour and a half or two hours a week is usually given to Manual Training; the Workshop Practice needs at least three half days a week, according to the subject and the stage.

2.—The character of the course in shop work will depend upon the Manual Training work, if any, done in the preparatory forms of the Public and Separate Schools.

3.—Visits of inspection should be paid to the factories in the vicinity. These visits should be made the subject of class discussions and compositions.

Mathematics

Arithmetic.—Review of elementary operations; simple approximate and check methods; four-figure logarithms applied to multiplication and division; rapid calculation; vulgar and decimal fractions; the common and the metric systems; the application of ratio, proportion, and percentage to the solution of problems connected with industrial operations; simple accounts; oral arithmetic.

Measurement of areas of plane figures, the triangle, the parallelogram, the trapezium, the circle, by reducing to equivalent triangle, by use of squared paper and counting the squares, by weighing similar shapes in cardboard or metal sheets; obtaining measurements by use of the measuring tools used in the trades and making calculations by graphic methods and by pocket-book formulas; volumes of simple solid figures.

Algebra.—Elementary rules; easy fractions; simple equations of the first degree of one unknown; plotting of points and the construction of simple graphs; application of algebraical methods to the solution of practical problems; simple workshop formulas.

Geometry.—Definitions; use of compass, protractor, and ruler graduated in inches and in centimetres and millimetres; graduating of scales; accuracy of drawing to scale; measurement of angles and lines; measurement of triangles; simple constructions leading to the self-checking of the student's work.

INSTRUCTION.—In the course in Mathematics free use should be made of mechanics' and engineers' handbooks for formulas and tables.

Elementary Science

An experimental course as follows, related as far as practicable, to men's industries:

Measurement in Metrical and English units of length, area, volume, and mass; structure and use of the Balance.

The Three States of Matter: Defined and explained; Molecular Theory.

The mechanical powers; some of their more important simple applications.

Pascal's Law, statement and verification, some of its more important applications; pressure of liquids in its various relations; Archimedes' principle; specific gravity, common methods of finding specific gravities of solids and liquids.

The properties of gas, as exhibited by air as a type; the relation between the volume and pressure of a gas; Boyle's Law; practical applications of air pressure, air-pump, common pump, siphon, air-brakes; meaning of wind pressure; some of the more important applications of wind pressure.

Nature and sources of heat. Simple explanations of the effects of heat in expanding solids, liquids, and gases; meaning of temperature, as compared with the quantity of heat; thermometers. Simple explanations of the effects of heat, moist air, water, and common acids on materials used for constructional purposes. Rusting, rotting, and the use of protective coverings on metal and wood; combustion of solids, and liquid and gaseous fuels, and their application to industrial purposes. Simple explanations of the chemistry of the foregoing.

Drawing

Mechanical Drawing.—Instrumental drawing; geometrical construction; orthographic projection; ~~intersection and development of surfaces~~; elementary working drawings, models and sketches; dimensioning; drawing to a scale; tracing and blue-printing; ~~perspective drawings developed from plans~~.

Freehand Drawing.—Drawing from the flat; line work; object drawing; memory drawing; shading; outline drawing from natural forms, ~~leaves, flowers, etc.~~; lettering; freehand perspective, practically developed; simple design as applied to the work being done in the shops; quick sketches for industrial purposes.

Industrial Design.—An elementary ~~course applicable to the shop work~~ ^{principles of Design.}

INSTRUCTION.—The course in Drawing should emphasize the accurate reading of working drawings and blue prints, and the making of quick and accurate sketches. Drawing is fundamental in the industries and should be apportioned at least four or five periods a week.

English

Literature.—Intelligent comprehension of suitable authors; systematic oral reading in class; memorization and recitation of choice selections, reading of standard authors at home, and in school, aloud and silently; also of books that bear on the student's special course; the reading and study of articles in industrial and scientific journals.

Reading.—Intelligent and intelligible reading; exercises in articulation and vocalization.

Composition and Spelling.—Oral and written composition; elements of narration, description and exposition; letter writing; the spelling of words in common use, emphasis on words used in men's trades; class debates; correction of mistakes made in speaking and writing; business forms and correspondence.

Grammar.—The elements of formal grammar; emphasis on the practical applications to oral and written composition.

INSTRUCTIONS: 1.—Two lessons of thirty minutes each shall be given every week in Reading, the average number of pupils in each class being not more than twenty-five and the time being increased or diminished proportionately when the average in the class is greater or less than twenty-five.

2.—The course in Composition should train to accurate, plain and forcible expression, and should include industrial topics. The course in Literature should cultivate a taste for good reading.

History and Geography

History.—A brief outline of Canadian History to 1840 and a more extended outline from 1840 to the present time, with emphasis on the industrial development of Canada and on inventions, discoveries, and their results.

The organization and value of Trades Unions, Manufacturers' Associations, Boards of Trade, Farmers' Institutes, etc.

Forms of civil government in Canada and Ontario.

The rights and duties of citizenship.

Supplementary reading and biographical sketches of persons famous in British and Canadian History and in Greek and Roman History.

Great events of current history.

Geography.—The principles of geography; the chief phenomena of air, earth, and sky; an elementary study of the political, commercial and industrial geography of Europe and America, with special reference to the resources, industries, and commerce of the British Empire, Canada, and the United States.

INSTRUCTIONS: 1.—The main object of the course in History is to develop the industrial citizen, and, consequently, the emphasis should be placed upon industrial or economic phenomena—upon the development of transportation and communication, the growth of municipalities, and civic organization. This involves the changes being produced by the concentration of labour and capital in production.

2.—For the course in Geography, books of travel and other supplementary reading from the School or the Public Library should be supplied; also, when practicable, exhibits of the products characteristic of the countries studied; and mounted photographs of famous places.

Penmanship

Special attention should be given to the formation of a graceful legible business hand.

~~The formation of legible, quick handwriting.~~

SECOND YEAR

Shopwork

GENERAL

(1) The course in woodworking affords the best general elementary training in the use of tools. The course of the first year may accordingly be continued and extended.

SPECIAL

(2) Where the local industries are varied in character, specialization may be provided as follows, for example:

(a) For pupils who expect to engage in machine construction or operation, or in machine drafting, or allied occupations;

Elementary Machine Pattern Making.—Allowance for shrinkage of castings; the necessary taper for withdrawing a pattern from the mould, allowance for subsequent machining of casting; patterns made in halves; use of cores; core-boxes and core-prints; work built up in segments to avoid shrinkage and give strength; parts dovetailed or pinned on, to allow of withdrawal from the mould.

Metal Work.—Use of hammer, chisel, file and scraper; forging; lathe work; elementary machine shop practice.

- (b) For pupils who expect to engage in building construction or architecture or allied occupations:

Elementary Building Construction, including more difficult joints than those in first year work; doors and door frames; window sashes and frames; laying out simple work; arches; mitred work; glueing; lathe work.

- (c) For pupils who expect to engage in artistic trades:

Artistic Work.—Modelling in plasticine and clay; work in copper, brass and leather, giving practice in designing, etching, cutting, fitting, riveting, soldering, hammering, and the raising of leather and sheet metal.

- (d) For pupils who expect to engage in electrical trades:

Electrical Work.—Names of tools and their uses; simple wiring and lighting, connecting of batteries with bells, push buttons, etc.; electric light and motor circuits.

- (3) Elementary shop economics and simple specifications for each course in shop work.

Materials

The growth, character, and uses of various woods; the methods of preparation and manufacture of other natural products useful to man, as, for example, cotton, linen, and wool; the various kinds of coal, oil, clay, building stone, concrete, mortar, and cement; metals used in the industries; methods of tempering and preserving steel; the composition and uses of brass, Babbitt metal, pewter, etc.

Mathematics

Arithmetic.—Additional problems in connection with the ~~industrial~~ instruction in the other departments. *Shopwork, science, draughting.*

The surface areas and volumes of prisms, pyramids, frustums, spheres, anchor rings; the use of Simpson's rules for areas and volumes of irregular figures.

Algebra.—Factoring; fractions; simple problems involving equations of one and two unknowns; indices; surds; the use of graphs in determining laws from data obtained by observation or experiment.

Geometry.—Problems of construction; geometric loci; equality of triangles; parallel lines; properties of circles; similar figures; application to problems in mensuration and surveying, such as, finding the area of a figure drawn to scale from data given in the field book.

Trigonometry.—Definitions; ratios of angles found by means of squared paper and by use of trigonometrical tables; solution of right-angled triangles; simple problems in surveying and mechanics; shop trigonometry.

Elementary Science

An experimental course as follows, related as far as practicable to men's industries:

Physics.—~~Course of the First Year reviewed~~; effects of heat on substances used for constructional purposes; specific, sensible, and latent heat, ~~and the~~ practical application of their qualities; melting and boiling points; steam raising and the properties of steam; ~~the transmission of heat~~; conduction, convection and radiation, and their applications to practical work; hot and cold water supply; ~~exhaust steam heating and modes of ventilating.~~

Heat
methods of heating + ventilating.

Magnetism and Electricity: laws of magnetic attraction and repulsion; polarity magnetic induction; terrestrial magnetism; construction of simple voltaic cell; decomposition of water by electricity; electro-magnet; electric bell; telegraph; telephone; dynamo; heating and lighting effects of the current; motors.

Sound. Nature and propagation of sound; pitch of sound; consonance and resonance; reflection of sound; echoes.

Light. Nature and propagation of light; simple experiments illustrating the reflection and refraction of light; dispersion of light; colour of bodies.

Chemistry.—Matter and energy; physical and chemical change; elements, compounds, mixtures and solutions; acids and bases; hydrogen, oxygen, water and air; conservation of mass; oxidation and reduction; sulphur, nitrogen, chlorine, carbon; the most important of the commercial combinations of the foregoing; simple, necessary explanations of chemical theory.

Drawing

Mechanical Drawing.—First year course, continued and extended; sheet metal patterns; conic sections; isometric projection; working drawings of machine and architectural details to a scale, from pupils' own sketches; tracing and blue-printing. Working drawings of the objects being constructed in the shops.

Freehand Drawing.—Work of the first year continued and extended; rendering in pencil, ink, charcoal, and wash; freehand perspective; sketching from machine and architectural details; conventionalization of natural forms, flowers, etc.; composition; design as applied to the shop work in hand.

Industrial Design.—An elementary course applicable to the shop work.

English

Literature.—Course of the first year continued and extended.

Composition.—Oral and written composition; elements of narration, description, exposition, and argumentation; class debates.

Grammar.—Course of the first year reviewed; emphasis on the practical applications.

History and Geography

History.—A very brief outline of British History to the Tudor Period, a brief outline to 1685, and a more extended outline to the present time.

Special emphasis on the most important constitutional acts and the industrial development of Great Britain, and on inventions, discoveries and their results.

Supplementary reading and biographical sketches of persons famous in British and Canadian History and in Greek and Roman History.

Great events of current world history.

Geography.—The course for the First Year continued and extended.

Commercial Subjects

Enough single entry to enable the pupil to keep records of petty cash or stockroom accounts in a shop; the formation of a legible, quick handwriting.

INSTRUCTION.—When the course is continued long enough, the pupils should be trained to carry out any cost system he may find in the shop where he may be employed.

Courses for Girls

FIRST YEAR

Household Science

Cookery.—Common food materials and their dietetic values; plain cooking; fruit preserving and canning; care of kitchen and kitchen utensils; the use of the stove and its various parts. Planning a meal; table service.

Household Economics.—Management, routine; care of house; furnishings; estimating cost of furnishing kitchen, etc.; sanitation and disposal of waste.

Sewing.—Hand Sewing: The various stitches; button-holes, etc.; darning and mending; cutting by patterns and making a simple draft; the making of a hand-made garment; the use and care of domestic sewing-machines; the making of undergarments.

Laundry Work.—Necessary materials (water, alkalies, soap, blueing, starch), and the action of each.

Processes in the washing of white clothes, coloured clothes, woollens.

Textiles.—Development in relation to the industries connected with textile manufacture. Evolution of spinning and weaving and inventions connected with these. Results of these inventions. A general study of natural and manufactured fibres as used in textile industries.

INSTRUCTIONS: 1.—If there is a two years' course the laundry work might be deferred, in whole or in part, to the second year.

2.—In Household Science more time is needed than for the cultural and practical Household Science of the Primary Schools; and, on account of the limitations of the rest of the course, more time can be apportioned to the shop work of the girls than to that of the boys. Visits should be made to the local "openings." These visits should be made the subject of class discussions and compositions.

Arithmetic

Arithmetic.—Review of elementary operations; rapid calculation; oral arithmetic; vulgar and decimal fractions; application of ratio, proportion, and percentage to problems connected with women's trades and businesses; simple accounts; oral arithmetic.

Measurement and calculation of areas of plane surfaces, as needed for women's trades.

English

Literature.—Intelligent comprehension of suitable authors. Systematic oral reading in class. Memorization and recitation of choice selections. Reading of standard authors at home and in school, aloud and silently, and of some books that bear on the pupil's special course. Articles in journals and magazines that deal with special points in the course.

Composition and Spelling.—Oral and written composition; the spelling of words in common use, with emphasis on the words used in women's trades; elements of narration, description, exposition, and argumentation; letter writing; business forms and correspondence.

Oral and written reproductions or abstracts; class debates; correction of mistakes made in speaking and writing.

Reading.—Intelligible and intelligent reading; exercises in articulation and vocalization.

Grammar.—The elements of formal grammar; emphasis on the practical applications to oral and written composition.

INSTRUCTIONS: 1.—Two lessons of thirty minutes each shall be given every week in Reading in each class, the average number of pupils in each class being not more than twenty-five and the time being increased or diminished proportionately when the average in this class is greater or less than twenty-five.

2.—The course in Composition should train to accurate, plain, and forcible expression, and should include industrial topics. Suitable industrial magazines should be supplied. The course in Literature should cultivate a taste for good reading.

History and Geography

History.—A brief outline of Canadian History to 1840 and a more extended outline from 1840 to the present time, with emphasis on the industrial development of Canada and on inventions, discoveries, and their results.

The organization and value of Trades Unions, Manufacturers' Associations, Boards of Trade, Farmers' Institutes, etc.

Forms of civil government in Canada and Ontario.

The rights and duties of citizenship.

Supplementary reading and biographical sketches of persons famous in British and Canadian History and in Greek and Roman History.

Great events of current history.

Geography.—The principles of geography; the chief phenomena of air, earth, and sky; an elementary study of the political, commercial and industrial geography of Europe and America, with special reference to the resources, industries and commerce of the British Empire, Canada, and the United States.

INSTRUCTIONS: 1.—The main object of the course in History is to develop the industrial citizen, and, consequently, the emphasis should be placed upon industrial or economic phenomena—upon the development of transportation and communication, the growth of municipalities, and civic organization. This involves the changes being produced by the concentration of labour and capital in production.

2.—For the course in Geography, books of travel and other supplementary reading from the School or the Public Library should be supplied; also, when practicable, exhibits of the products characteristic of the countries studied; and pictures of famous places by means of mounted photographs.

Drawing

Freehand.—In outline, light and shade, from models and casts; from observation and from memory; drawing from natural forms, leaves, flowers, etc., with simple conventionalization; freehand perspective; quick sketches to show designs; costume sketching.

Design.—The principles of design and colour harmony, applied to curtains, tucks, ruffles, embroidery, pillow-shams, etc.; making of drafts and patterns; combinations of colour and trimmings for dresses and headwear. Relation of house to surroundings; planning of house, colour schemes, interior decoration, hanging of pictures.

Penmanship

The formation of legible, quick handwriting.

SECOND YEAR

Household Science

Cookery.—Course of the first year continued and extended, including advanced cookery, invalid cookery, and dieting for infants.

Household Economics and Hygiene.—Course of the first year continued and extended; municipal and state sanitation; transmissible diseases; disinfecting and disinfectants.

Sewing.—Dressmaking; drafting; cutting out; fitting; making shirtwaists, shirtwaist suit; designing; making dresses; application of trimmings, lace, etc.; the use and care of power sewing-machines.

Millinery.—Drafting; making buckram shapes from draft; making wire shapes; covering with silk, velvet, straw; trimmings; finishing; colour harmony; making and trimming hats; textiles.

Art Work

Sample mounting, book covers, tissue paper novelties and decorations; braiding and embroidery; basket work; stencilling; wood-carving; china-painting; leather work.

Elementary Science

An experimental course as follows, related as far as practicable, to women's industries:

The three states of matter explained and defined.

The properties of a gas as exhibited by air as a type; the barometer; the relation between the volume and pressure of a gas; practical applications of air pressure, air-pump, common pump, siphon.

Nature and source of heat; experiments to illustrate the expansion of solids, liquids, and gases by heat; some practical applications of the principle of expansion; the anomalous expansion of water, its significance; meaning of temperature as compared with quantity of heat; the mercury thermometer; meaning of latent heat, applications; effects of heat upon cooking materials.

Nature and propagation of sound; pitch of sound; consonance and resonance; reflection of sound, echoes.

Nature and propagation of light; simple experiments illustrating the reflection and refraction of light; dispersion of light; colour of bodies.

Magnets; laws of magnetic attraction and repulsion; the simple voltaic cell; electro-magnet; electric bell; telephone; heating and lighting effects of the current.

The air and its constituents; water and its constituents and properties; limestone and its decomposition products, quicklime and carbon dioxide; bleaching and bleaching powder, dyes; simple explanations of chemical theory.

Materials

The distribution, growth, preparation, processes, marketing and manufacture of the leading textile fibres, cotton, wool, linen, silk. Simple tests for the identification of these fibres either as adulterants or in their proper uses. A special study of fabrics and their uses, with continued work on other textile fibres. Cost of materials. Practical work in choice of materials.

Freehand Drawing and Design

The work of the first year continued and extended.

INSTRUCTION.—The work should be framed so as to bring it into harmony with the aims of the pupil. The pupil's course should be guided so as to secure close application of the instruction she has received in drawing and design and in colour harmony, to the special line of industry she has selected. The value of art and its application should be emphasized.

English

Literature.—Course of the first year continued and extended.

Composition.—Course of the first year continued and extended.

Grammar.—Course of the first year reviewed; emphasis on the practical applications.

History and Geography

History.—A very brief outline of British History to the Tudor Period, a brief outline to 1685, and a more extended outline to the present time.

Special emphasis on the most important constitutional acts and the industrial development of Great Britain and on inventions, discoveries and their results.

Supplementary reading and biographical sketches of persons famous in British and Canadian History and in Greek and Roman History.

Great events of current world history.

Geography.—The course for the First Year continued and extended.

Commercial Subjects

Enough Single Entry to enable the pupil to keep records of petty cash or stock-room accounts in a shop; bills, cheques, notes, drafts, etc.; the formation of a legible, quick handwriting.

INSTRUCTION.—When the course is continued long enough, the student should be trained to carry out any cost system she may find in the shop where she may be employed.

PART-TIME CO-OPERATIVE COURSES

18.—Under present conditions, the solution of the problem of the education of workmen and workwomen will, in most cases, be found in the establishment of part-time co-operative industrial day courses. Many will not be able to take the general industrial day courses and the night classes are admittedly a tax upon the mental powers.

The form of organization to be adopted at any centre will depend upon the character of the local industries. In some cases arrangements can be made for the employees to attend school one or more half days a week and to work in the shop the remainder of the time; in others, one or two hours a day may be given to class instruction; and, in others again, it may be found more convenient to have the employees grouped in pairs, one taking the place of the other alternately at school and at work. All of these plans have been found by actual experience to be practicable under suitable conditions. Moreover, as in the case of the night schools, the subjects to be selected for part-time courses will depend upon local conditions; no detailed course of study can be prescribed.

The advantages of the part-time co-operative courses are obvious. They provide the youth with the means of support and at the same time offer opportunities for systematic theoretical and practical instruction. The ideal system would be a full-time industrial day school for pupils between the ages of fourteen and sixteen, the years that are productively of least value, followed by part-time co-operative courses, the school taking charge of the instruction in the academic and technical subjects, and the workshop, of the more specialized training on the practical side.

The importance of organizing such courses should be carefully considered by Advisory Committees. It must, however, be clearly understood that the chief responsibility for the establishment of a comprehensive and reasonable system of industrial education for workmen and workwomen engaged during the day devolves upon the employers of labour.

GRADUATION DIPLOMAS

19. (1) Graduation Diplomas may be awarded by a School Board on the recommendation of the Advisory Industrial Committee to students in an Industrial, Technical, or Art school or department, on condition that the principal has certified that their conduct and attendance have been satisfactory, and that they have completed satisfactorily a course or courses of at least three years in one or more of the departments of study of an Industrial, Technical, or Art school or department.

(2) Each Graduation Diploma shall specify the courses the holder has taken.

(3) The Diplomas shall be signed by the Chairman of the Board, the Chairman of the Advisory Committee, and the Principal of the School.

INSPECTION

20. (1) Subject to instructions from the Minister or Director of Technical Education shall inspect each Industrial, Technical, and Art School and Department at least once each year.

(2) The powers of the Director in relation to the schools and departments under his charge are the same as those prescribed in High School Regulation 21 (1) (a) for the High School Inspectors in relation to the schools under their charge.

(3) On application to the Minister the services of the Director will be available to Advisory Committees for the purposes of establishment and organization.

TEXT BOOKS

21. (1) The text-books for the purely academic subjects shall be the same as those prescribed for the High Schools.

(2) The text-books for the Industrial, Technical and Art subjects shall be those selected by the Principal and approved by the Minister. In Appendix B is given a list of books from which Text and Reference books may be selected.

DISTRIBUTION OF THE LEGISLATIVE GRANTS

22. When the accommodations, the equipment, the text-books, the qualifications of the staff, and the courses of study are satisfactory to the Minister, and when the Board is not in receipt of a special Legislative grant for Industrial, Technical, or Art Schools, the annual Legislative grant for Day and Night Industrial, Technical, and Art Schools shall be distributed in accordance with the following scheme:

I DAY SCHOOLS

Fixed Grants

(1) A fixed grant on Forms as follows:—

(a) Full-time Forms approved by the Minister. A grant of \$100 for each of the first five forms established; \$75 for each of the next five; and \$50 for each of ten succeeding forms.

(b) Part-time co-operative Forms approved by the Minister. A grant of ~~\$25~~ ¹⁰⁰ for each of the first five forms established; ~~\$50~~ ²⁵ for each of the next five; and ~~\$25~~ ⁵⁰ for each of ten succeeding forms.

NOTE.—A Form consists of the pupils taking the course prescribed for any year and taught separately from the rest of the school.

Salaries

(2) A grant on salaries of staff approved by the Minister, proportioned as follows on the total salaries of the staff:

In cities with a population of 150,000 and over, one-third; in other cities, one-half; in towns, two-thirds; and in villages, five-sixths. Maximum grant, ~~\$5,000.~~ ^{\$3,000.00}

Equipment

(3) (a) An initial grant of 40 per cent. on new equipment, especially provided in any year and approved by the Minister for Day Industrial, Technical, and Art Schools, and 20 per cent. on the same equipment for each of three succeeding years. Maximum total grant in any year, ~~\$2,000.~~ ^{\$3,000.00}

(b) When an equipment on which the legislative grant has been paid to its full value remains unused for two years the Minister may direct the transfer of said equipment to one of the other centres in the Province.

II NIGHT SCHOOLS

Salaries

(1) A grant on salaries of staff approved by the Minister, proportioned as follows on the total salaries of the staff:

In cities with populations of 150,000 and over, one-third; in other cities, one-half; in towns, two-thirds; and in villages, five-sixths. Maximum grant, ~~\$5,000.~~ ^{\$5,000.00}

Equipment

(2) An initial grant of 40 per cent. on new equipment, especially provided in any year and approved by the Minister, for Evening Industrial, Technical, and Art Schools, and 20 per cent. on the same equipment for each of three succeeding years. Maximum total grant in any year, ~~\$1,000.~~ ^{\$2,000.00}

III DAY AND NIGHT SCHOOLS

Accommodations

(1) When the accommodations have been specially provided for Day or for Night Industrial, Technical, or Art Schools, the sums apportionable under the following scheme shall be payable for each item in actual use.

(2) When the accommodations provided for Day Schools are used also for Night Schools or vice versa, or when accommodations provided for High, Public, Separate, or Continuation Schools or other purposes are used for Night Industrial, Technical, or Art Schools, one-quarter of the sums apportionable under the following scheme shall be payable for each item in actual use for said classes, in addition to any other Legislative grants that may be payable on such accommodations.

I. For each item of the following, according to number, adequacy, and suitability:

	Grade			
	I	II	III	IV
	\$ c.	\$ c.	\$ c.	\$ c.
Class rooms	6 00	4 50	3 00	1 50
Lecture Rooms	9 00	7 00	4 50	2 50
Laboratories.....	9 00	7 00	4 50	2 50
Workshops	9 00	7 00	4 50	2 50
Teachers' Offices.....	3 00	2 50	1 50	1 00
Administrative Offices	3 00	2 50	1 50	1 00
Lavatories	9 00	7 00	4 50	2 50
Waiting and Assembly Rooms	9 00	7 00	4 50	2 50
Lunch Rooms	9 00	7 00	4 50	2 50
Halls	9 00	7 00	4 50	2 50

Maximum annual grant, ~~\$100.~~ **\$800.00**

NOTES: 1.—The class-rooms include rooms for academic work, art work, drafting, and designing.

2.—The laboratories include the rooms for chemistry, general physics, electricity, mathematics, and engineering.

3.—The workshops include the rooms for:—

- (a) Claymodelling, woodcarving.
- (b) Woodworking, woodturning, forging, machine work, and a construction room.
- (c) Hand sewing, machine sewing, dressmaking, millinery.
- (d) Kitchen, laundry, dining-room, and a model household suite of rooms.
- (e) Any other practical subject approved by the Minister.

II. For each item of the following, according to its adequacy and suitability:

	Grade			
	I	II	III	IV
	\$ c.	\$ c.	\$ c.	\$ c.
School Grounds	~~32.00~~ 16 00	~~24.00~~ 12 00	~~16. 8 00~~	~~8. 4 00~~
School Building.....	~~48.00~~ 24 00	~~36.00~~ 18 00	~~24.12 00~~	~~12. 6 00~~
Assembly Hall.....	~~32.00~~ 16 00	~~24.00~~ 12 00	~~16. 8 00~~	~~8. 4 00~~
Supply Room	~~12.00~~ 6 00	~~9.00~~ 4 50	~~6. 3 00~~	~~3. 1 50~~
Gymnasium	~~40.00~~ 20 00	~~30.00~~ 15 00	~~20.10 00~~	~~10. 5 00~~
Reading-room and Library	~~18.00~~ 9 00	~~14.00~~ 7 00	~~9. 4 50~~	~~8. 2 50~~
Exhibition Room.....	~~18.00~~ 9 00	~~14.00~~ 7 00	~~9. 4 50~~	~~8. 2 50~~

Maximum annual grant, ~~\$100.~~ **\$200.00**

NOTES: 1.—The Assembly Hall should be provided with platform and seats, and should be suitably decorated.

2.—The Supply Room is a room for selling material for the courses, or for supplying it free.

3.—For the requirements of the Gymnasium, see High School Regulations. When practicable, a swimming pool should also be provided.

4.—The Reading-room and Library should be provided with book-cases, tables, chairs, and office furniture.

5.—The Exhibition Room should be supplied with cases for the finished products of the school and for illustrative material.

III. For each item of the following concerned in I and II above, the grading being based on adequacy and suitability and the capacity of each item being valued in class-room units.

	Grade			
	I	II	III	IV
	\$ c.	\$ c.	\$ c.	\$ c.
Black-boards	2 00	1 50	1 00	0 50
Desks and Chairs	8 00	6 00	4 00	2 00
Heating	12 00	9 00	6 00	3 00
Lighting	6 00	4 50	3 00	1 50
Ventilation	12 00	9 00	6 00	3 00
Water Supply	6 00	4 50	3 00	1 50
Power Supply	12 00	9 00	6 00	3 00

Maximum annual grant, ~~\$500.~~ *1,000.00*

CONTINGENCY OF GRANTS

23. If the amount voted by the Legislature is insufficient to pay in full the proportionments under the foregoing scheme, or, if there is a balance left over after payment in full, the Minister may make a *pro rata* reduction or increase.

ACCOUNTS

24. The receipts and expenditures on account of the Day and the Night schools shall be kept separate from each other and from those for other school purposes, and shall be separately reported to the Minister.

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APPENDIX A

FORMS USED IN ADVERTISING AND MANAGING
DAY AND NIGHT INDUSTRIAL, TECHNICAL,
AND ART SCHOOLS AND DEPARTMENTS

APPENDIX A

I. POSTERS

Windsor Industrial School EVENING CLASSES

ENDORSED BY THE TRADES AND LABOUR COUNCIL
AND BUILDERS' EXCHANGE

FOR MEN AND BOYS

Mechanical Drawing	Electricity
Architectural Drawing	Sheet Metal and Cornice Work
Freehand Drawing and Industrial Design	Plumbing and Pipe Fitting
Mathematics for the Workshop	Painting
Arithmetic and English	Roof Construction
Building Construction and Estimating	Automobile Engines

FOR WOMEN AND GIRLS

Cooking	Plain Sewing	Dressmaking	Millinery
Freehand Drawing and Industrial Design	Arithmetic and English		

SPECIAL CLASS

Reading, Writing and Arithmetic for those who did not have a chance to attend day school.

Open October 20th

COLLEGIATE INSTITUTE, CORNER GOYEAU AND ANN

Enrolment Fee \$1.00. No Other Fees.

ADVISORY INDUSTRIAL COMMITTEE

J. C. TOLMIE, Chairman

M. A. BRIAN
J. R. MASON

J. R. CHAPIN
ROBT. PARKER

A. A. ELLWOOD
W. T. PIGGOTT

H. E. GUPPY
P. SMITH

GEO. MERIFIELD

Apply to Principal for circulars and information. He will be at the Collegiate Institute Office every evening from 8.00 to 9.00 o'clock, from October 12th to October 16th.

F. P. GAVIN, Principal.

WOODSTOCK

Evening Industrial Classes

1914-15

OPEN OCTOBER 14th

COURSES :

Practical English and Mathematics
Cabinet Making and Furniture Designing
Mechanical Drawing
Building Construction
Machine Shop Practice and Forge Work
Electricity
Dressmaking
Millinery
Domestic Science and Home Economics

Any resident of the City who is fourteen years of age, and who does not attend a day school, is eligible to attend the Evening Industrial Classes. There is no entrance examination.

Circulars and application forms may be had at the office of this firm or at the Public Library.

The Principal will be pleased to give information or advice to any one interested. He will be at the Collegiate Institute every class night, or at any other time by appointment.

FALL TERM : October 14th to December 20th. **SPRING TERM :** January 5th to April 1st.

NO FEES

We have pleasure in recommending these classes of the Woodstock Industrial School to our employees.

.....
Firm Signature.

Industrial and Art School

"Education for Efficiency"

CORNER KING AND COLBORNE STREETS
LONDON

WINTER TERM

Opens the First Monday in January

EVENING AND AFTERNOON CLASSES

Cooking
Millinery
Dressmaking
Embroidery
English and
Arithmetic

**New Classes
Opening in
JANUARY**

Stair Building
Roof Framing
Sign Writing
Machine Shop
Practice
Cabinet Making
Building
Construction
Drawing

Write or Phone for Full List of Classes

(Pocket for)

**Application
Cards**

TAKE ONE!

FEES NOMINAL

**Only \$2.50 Per Term
for 2 and 3 Lessons
Per Week**

REGISTER NOW !

(Pocket for)

**Application
Cards**

TAKE ONE!

Registration Friday and Saturday, January 2nd and 3rd

In the Alexandra School, Corner King and Colborne Streets, in the evening from 7.30 to 9.30 and in the afternoon from 3.00 to 5.00 o'clock.

A Postal Card or Phone enquiry will bring you full information.

II. LEAFLETS

EVENING CLASSES

BY BOARD OF EDUCATION
WINDSOR

ELECTRICITY

Magnetism—electro-magnets, voltaic cells.
Measurement of resistance, the ohm,
Wheatstone's bridge—galvometers.
Measurements of potential—the volt—
voltmeters, ammeters, wattmeters.
Electrolysis—storage batteries.
Arc and incandescent lamps, measuring
candle power, resistance and fall of po-
tentials.
Electric bell, telegraph, telephone.
Dynamo and motor.
Wireless telegraphy.

HOUSE WIRING

A short course of ten lessons in house
wiring will be given at the end of the
course if the class wishes it.

OPEN OCTOBER 20th

COLLEGIATE INSTITUTE

Enrolment fee—\$1.00—no other fees.

For application forms write to

F. P. GAVIN, Principal

Collegiate Institute Phone 978.

EVENING CLASSES

IN COLLEGIATE INSTITUTE

Shop Mathematics

The aim of this course will be to give
the fundamental principles of mathematics
to shop men, using familiar terms and pro-
cesses, and giving such applications as will
help in the every-day problems of the
shop.

The work taken up will meet the needs
of the class.

ARITHMETIC—Fractions, decimals, square
root, mensuration of plane figures and
solids.

ALGEBRA—Symbols — the four simple
rules—equations—meaning and use of
formule.

TRIGONOMETRY—Ratios of an angle, the
right angle—angle triangle use of tables,
logarithmic.

OPEN OCTOBER 20th

Enrolment fee—\$1.00.

F. P. GAVIN, Principal

Collegiate Institute Phone 978.

EVENING CLASSES

OF THE BOARD OF EDUCATION
WINDSOR

AutoEngine Management

A class for the owner, the chauffeur, the
automobile worker or the salesman, in the
theory and principles of the internal com-
bustion engine.

DEMONSTRATION MOTORS

and diagrams will be used to illustrate
the principles.

Motor parts and their functions.

Two and four cycle motors.

Fuel supply, carburetor control.

Motor cooling methods.

Ignition systems.

Batteries, coils, magnetos.

Lubrication Methods.

Self-starting systems—demonstration of

OPEN OCTOBER 20th

In Collegiate Institute

Enrolment fee—\$1.00.

Apply to

F. P. GAVIN, Principal

Collegiate Institute Phone 978.

INDUSTRIAL
EVENING CLASSES

IN COLLEGIATE INSTITUTE

Plumbing and PipeFitting

Instruction will be given on lead pipe
bending, wiping joints, soldering joints and
seams.

Proper use of tools, methods of fitting up
water-closets, baths, lavatories, sinks, range
boilers, laundry stoves and heaters.

Proper taps, soil, drain and sewer pipes,
proper size of pipes for water and drain
work.

Names and uses of pipe-cutting tools,
building heating coils, mitre and return
coils.

Globe, check and other valves, radiators.
Drawings of work with explanations.
Practice in taking off a bill of material
from a blue print.

Lectures or talks will be given on esti-
mating on contracts, making rough plans,
fixtures, trapping of fixtures, plumbing by-
laws.

OPEN OCTOBER 20th

For information and circulars apply to

F. P. GAVIN, Principal

Collegiate Institute Phone 978.

Evening Classes in Collegiate Institute

MECHANICAL DRAWING

COURSE I—For Beginners

- 1 Use of instruments, lines and lettering.
- 2 Simple geometry problems, and their application.
- 3 Freehand dimensioned sketches of simple objects, such as bolts, burrs, and simple castings.
- 4 Simple projection.
- 5 Plans and elevations of bolts, burrs, castings and forgings.
- 6 Working drawings from sketches of models with detailed dimensions.
- 7 Specifications of material.
- 8 How machine operations are indicated.

COURSE II—For those who have taken Course I

- 1 A more intensive study of projective geometry, and the drawing of machine detail.
- 2 Isometric drawing.
- 3 Cams, gears, and mechanical movements.
- 4 Elements of machine design.

In both courses instruction will be given in the calculations required by the machinist.

OPENING OCTOBER 20th.

Enrolment fee \$1.00. No other fees.

Each student must supply his own drawing instruments, triangles and scale. Boards and tee squares supplied by the school.

Write to principal for application forms.
Collegiate Institute Phone 978.

F. P. GAVIN, Principal

EVENING CLASSES

BY BOARD OF EDUCATION

Sheet Metal Work

A COURSE OF FORTY LESSONS

Tools and their uses, soldering, laying out and cutting elbows, patterns, tees and Y's.

Cutting mitres, flaring objects, both square and round.

Smoke-stack base, skylights, ventilators, roofing and flashing.

CORNICE WORK

FURNACE WORK

Throughout the course instruction will be given in the calculations necessary—determining diameter, circumference, cubic contents of square, cylindrical and conical vessels.

OPEN OCTOBER 20th

Enrolment fee, \$1.00.

No other fees to residents of Windsor.

For application form write to

F. P. GAVIN, Principal

Collegiate Institute Phone 978.

Evening Classes for Women and Girls

1. **Plain Sewing** for those without much experience in needle-work—common—stitch forms, seams, bands, button holes, plackets, darning, making of whitewear.
2. **Home Dressmaking**—Instruction in taking measurements, cutting, basting, fitting, the making of plain suits to fit oneself.
3. **Children's Clothes**—The making, altering and mending of clothing for children.

OPEN OCTOBER 20th

In each of these classes the student will provide her own material, and the finished garments are her own property.

Enrolment fee—\$1.00.

For information apply to

F. P. GAVIN, Principal

Collegiate Institute Phone 978.

EVENING CLASSES

Windsor Industrial School

COOKERY

The aim will be to teach good, practical, economical cookery. The student, under supervision, will prepare dishes that are pleasing to the palate and nourishing to the body.

The course will be a practical study of meats, vegetables, milk, eggs, bread and biscuits, etc.

AN ADVANCED COURSE

will be given for those who took the course last year. This will be a study of the more difficult dishes and of salads and salad dressings, cake, pastry, puddings and ices.

The study of food values and proper balancing will accompany the work in both courses.

OPEN OCTOBER 20th

In Collegiate Institute

The classes will be held in Dougall avenue and Assumption street schools.

Enrolment fee—\$1.00.

Apply to

F. P. GAVIN, Principal

Collegiate Institute Phone 978.

III. SMALL FOLDERS

THE attention of ambitious men and women engaged in industrial pursuits, who feel the need for technical training to meet the demand of the hour for efficiency, is directed to the educational courses provided by the Industrial Advisory Committee of the Ottawa Collegiate Institute Board.

Last October the committee opened Industrial Classes to provide supplementary scientific, artistic and practical education, and these were so largely attended and were found so beneficial that they seemed to fill a special need. The committee now feel compelled to put the classes on a permanent basis, adding some new courses and very carefully revising the old.

The classes will Re-open Monday evening, October 5th, 1914, when instruction will be given in the following subjects:—

FOR MEN AND BOYS

Practical Mathematics, including Shop Arithmetic, Mensuration, Algebra and Geometry; Mechanical Drawing and Machine Design; Architectural Drawing and Building Construction; Chemistry, Elementary Mechanics; Electricity, Freehand Drawing and Industrial Design.

FOR WOMEN AND GIRLS

Freehand Drawing and Industrial Design, Cookery, Plain Sewing, Home Dressmaking and Millinery.

A PREPARATORY COURSE

Is also provided in Elementary Arithmetic and English for those who feel the need of additional instruction before they can take advantage of the teaching in the higher technical branches.

RE-OPENING

INDUSTRIAL
EVENING CLASSES

1914-1915

OTTAWA COLLEGIATE
:: INSTITUTE BOARD ::

Industrial Advisory Committee

- | | |
|------------------------------|----------------------|
| G. H. Bowie, Esq., Chairman. | J. F. H. Laperriere. |
| Lt.-Col. Anderson. | J. McKinley. |
| T. Birkett. | Judge MacTavish. |
| M. J. Burke. | D. Murphy. |
| A. A. Dion. | C. G. Pepper. |
| W. B. Garvock. | |

R. A. Sproule.

W. W. Nichol, B.A., Principal.

Cecil Bethune, Sec'y-Treasurer.

HOUSE CARPENTRY

Plumbing and Sanitation, Sheet Metal Working and other Trade Courses will be provided if there is a sufficient demand. A class will be started in any of these if at least fifteen students present themselves.

ADVANCED COURSES

Have been arranged for those students who were in attendance last year.

Cost of Tuition

These classes are practically free. A deposit of \$2.00 per subject for each male student and \$1.00 for each female student is required in advance. This deposit is only to guarantee attendance and will be refunded to such students as attend 85 per cent. of the lessons of their respective classes, reckoning from the date of entrance and whose conduct and progress are satisfactory.

Where Classes are Held.

The work in Cookery, Sewing, Dressmaking and Millinery will be carried on at the following Domestic Science centres:

The Manual Arts School, Waller Street; the School for Higher English and Applied Arts, Kent Street; and the Cambridge Street Public School. Students will be assigned to the centre nearest to their homes.

The class in Freehand Drawing and Industrial Design will also meet at the Kent Street School. All the other subjects will be taken up at the Collegiate Institute, Lisgar Street.

A VERY EFFICIENT STAFF OF OVER THIRTY INSTRUCTORS WILL BE PROVIDED

The Principal, W. W. Nichol, B.A., will be at the Ottawa Collegiate Institute, Lisgar Street, from 7 to 9 o'clock on the evenings of September 28th, 29th and 30th, to give full information regarding the various courses and to enroll pupils. The enrolment of all students and payment of fees must be made at the Collegiate Institute. No pupil will be allowed to enter the classes until the registration fee is paid.

Announcements containing detailed information with regard to the various courses can be obtained from W. W. Nichol, Collegiate Institute, Phone Queen 2098; Residence, Phone Queen 7444, or Cecil Bethune, 11 Central Chambers, Phone Queen 26.



WOODSTOCK EVENING INDUSTRIAL CLASSES

EDUCATION FOR EFFICIENCY

ANNOUNCEMENT

Fall Term, 1914

For Full Particulars see the Principal.

Register Now

For the FALL TERM.

EVENING CLASSES

Evening Industrial Classes for Boys and Men

EVERY WORKER AN ARTISAN

The Evening Industrial Classes will open in the Collegiate Institute on Wednesday, Oct. 14th. The object of these classes is to provide for men and boys engaged in the industries, a broader training than it is possible for them to receive in the shops under modern shop conditions. The theory and scientific principles underlying the processes will be emphasized. The successful artisan must know "why" as well as "how."

The Evening Classes are open to any resident of the city who is fourteen years of age and who does not attend day school. There is no entrance examination. There are no fees.

Every worker who is interested in his daily employment and has ambition to increase his skill as a workman, needs this instruction. It will give him greater efficiency in his work, and should result in better positions with increased pay.

COURSES FOR BOYS AND MEN

Mathematics and English
Cabinet Making and Furniture Designing
Mechanical Drawing
Building Construction
Machine Shop Practice and Forge Work
Electricity

Practical Education Pays. You will feel it in your pay envelope

NO FEES

EVENING CLASSES

Evening Classes in the Home Activities for
Women and Girls

The object of the courses for women and girls is to give a broad and practical training in the home activities. In these classes the students receive a thorough course in Millinery and Dressmaking, and at the same time make their own garments under expert instruction.

COURSES FOR WOMEN AND GIRLS

Mathematics and English
Dressmaking

Millinery

Domestic Science and Home Economics

The instructors have been selected rather for their practical than for their pedagogical qualifications. Those who have been successful in the industries through intelligent interest in their work, and who, by keeping abreast of the times, are filling responsible directive positions requiring technical skill and knowledge, have been selected. They thus bring to their work a first hand knowledge of actual industrial conditions and standards.

UP-TO-DATE EQUIPMENT

The equipment of the Woodstock Evening Industrial School is thoroughly up-to-date and adequate for the work of the school.

The Principal will be pleased to have you call and get full information.

WHY YOU SHOULD BE INTERESTED

The object of these evening classes is to place within the reach of every boy an opportunity of making a success in the industrial world, and to teach every girl thrift and efficiency in "home-making."

Don't let your boy enter one of the "blind-alley" occupations, to find himself at the age of twenty among the great army of "unemployables"—without a trade when the demand for skilled mechanics greatly exceeds the supply. Make a little extra effort and give your boy a chance. Knowledge is power.

Don't let your girl enter upon the duties of house-keeping for herself without a knowledge of the principles of cooking and housekeeping, and without the skill to make her own garments if need should arise. Thrift and happiness generally go hand in hand.

REGISTER NOW

PHONE 623

Hamilton Technical and Art School

Stinson Street (between West Avenue and
Victoria Avenue)

Evening Classes

for

Boys and Men, Girls and Women

Monday, Wednesday and Friday Evenings

from 7.30 to 9.30

IN HARD TIMES

when orders are few and employment slack, it is unfortunate that workmen have to be laid off until conditions improve. Other things being equal, the men to be retained in their positions have to prove themselves competent, well-informed and industrious.

No matter how good a workman you are, you can become better informed and more competent, and your employer must admit that you are industrious, if you attend the evening classes of the Technical and Art School.

Our shops are well equipped, our courses are practical, and our staff is composed of men and women who are both expert workmen and experienced teachers.

Make a selection from the list of courses given on the next page, and enroll at once, while there is yet room for you.

Many workmen, now well advanced in years, have expressed to us the regret that they had not, in their youth, the opportunity that is yours at the sacrifice of a little money and some leisure time.

**GIVE YOURSELF THE
BEST CHANCE TO SUCCEED.**

COURSES FOR BOYS AND MEN

ARCHITECTURAL DRAWING

This class is intended for workmen engaged in the building trades—Carpenters, Bricklayers, Plumbers, etc.—quite as much as for Architectural Students.

ELECTRICITY

For beginners, an experimental course in elementary electricity; for the more advanced, courses in house wiring and testing generators and motors.

FORGING

A course helpful not only to those who wish to become blacksmiths, but also to machinists and metal workers generally.

MACHINE SHOP PRACTICE

Bench work and practice on the lathe, shaper and milling machine.

MATHEMATICS

If you have ever found yourself at a loss to make the calculations called for in your everyday work, don't overlook this course.

MECHANICAL DRAWING

The ability to make and to read mechanical drawings is a great asset to every mechanic.

PATTERN MAKING AND WOOD-TURNING

This course gives ambitious young men an opportunity to learn, or to improve themselves in, a trade calling for much skill and intelligence.

WOOD-WORKING

Instruction in the use of wood-working tools, including the steel square. A good course for Carpenters, Cabinet Makers and others.

COURSES FOR GIRLS AND WOMEN

IN COOKING, MILLINERY, AND
SEWING AND DRESSMAKING

ART DEPARTMENT

Phone 6550

DRAWING IN VARIOUS MEDIUMS
DESIGNING, CLAY MODELLING,
CHINA PAINTING

We have DAY CLASSES for boys and girls in all the above subjects except Millinery.

A handsome illustrated booklet, describing our courses, is yours for the asking.

Telephone 623 or write to

J. G. WHITTON, Principal

IV. NEWSPAPER ADVERTISEMENTS

EVENING INDUSTRIAL CLASSES

WILL OPEN IN

THE WOODSTOCK COLLEGIATE INSTITUTE

WEDNESDAY EVENING, OCTOBER 14th

The Following Courses Will Be Taught:

For Men and Boys

Mathematics and English, Cabinet Making and Furniture Designing, Mechanical Drawing, Building Construction, Machine Shop Practice and Forge Work, Electricity.

For Women and Girls

Mathematics and English, Dressmaking, Millinery, Domestic Science and Home Economics.

Classes Will Be Held From 7.30 to 9.30, Evenings.

THERE ARE NO FEES

Forms of application may be had at the local factories and the Public Library, and will also be sent upon request.

The Principal will be in his office at the Collegiate Institute every evening from Oct. 5th to Oct. 10th, from 7 to 9 o'clock, to meet with those who wish to register.

I. M. LEVAN, *Principal*.

IF——

IF——you wish to take advantage of it, there is a valuable opportunity for you in the evening industrial classes about to be established at the Collegiate Institute. You cannot afford to lose it.

IF——you wish to increase your efficiency, now is the time for you to begin.

IF——you have no money for fees, just remember that there are no fees. We don't wish to get your money, but to enable you to earn more money for yourself and your family.

IF——you know that your early education in English and Mathematics was defective, now is the opportunity for you to remedy the defect.

IF——you would like a better position than you now hold, now is the time to fit yourself for holding it when the offer comes.

IF——you spend your evenings on the streets this winter, what will it profit you? Will it help to fill your pay envelope?

The Evening Industrial Classes will open at the Collegiate Institute at 8 o'clock on Wednesday evening, the 14th inst.

Register now. See the Principal at the Collegiate Institute any evening between 7 and 9 o'clock, and get full information.

I. M. LEVAN, *Principal*.

CORNWALL INDUSTRIAL SCHOOL

EVENING CLASSES

1914

COURSES.

1915

Mechanical Drawing, Shop Mathematics, Senior Arithmetic, Electricity. Domestic Science, English, Dressmaking, and other practical subjects.

Any person over fourteen years of age is entitled to attend these Classes, if not enrolled in a Day School.

A great chance to increase your earning power, cultivate your mind and make yourself a more useful citizen.

There is no entrance examination. No fees charged.

The Principal will be at the office of the Secretary of the High School Board (D. Monroe's Insurance Office, Glengarry Block, Pitt Street) every evening on the 8th, 9th and 10th of October from 7.30 to 9 to enroll intending pupils and to give information.

Circulars and application forms may be had by addressing the High School Board or Industrial Education Committee.

Classes will open on Wednesday evening, October 14th.

V. APPLICATION CARDS

TORONTO TECHNICAL SCHOOLS

DAY CLASSES—REGULAR COURSES

Toronto, ...191....

Pupil's Name Pupil's Age
 (Surname first) (on last birthday)
 Name of Parent or Guardian
 Address of Parent or Guardian Phone No.
 Occupation of Parent or Guardian
 Religious Denomination
 Date and place of passing Entrance Examination
 Last School and Grade in School Attended
 Course of Study desired

TORONTO TECHNICAL SCHOOLS

DAY CLASSES—PART TIME COURSES.

Toronto, ...191....

Name in full Age
 (Write Surname first)
 Name of Parent or Guardian
 Address of Parent or Guardian Phone No.
 Occupation of Parent or Guardian
 Last School and Grade in School Attended
 Name of Employer
 Subjects of Instruction Desired
 Remarks

EVENING CLASSES

Name Address
.....
Date Age
Occupation Name of Employer
Name or foreman under whom you work
School last attended
Form you were in when you left school
Country of birth
The subject you desire to take (1)
(2) (3)
First or Second year

To be filled in by Principal: School preferred Evening
Classes assigned Fees \$.....
Locker No. Receipt No.

VI. ADMISSION CARDS
COLLEGIATE INSTITUTE
EVENING CLASSES DEPARTMENT
ADMISSION CARD

Name
Address
Subject
Class Meets
First Lesson
School
Enrolment Fee Paid on

Please give this card to the Instructor.
F. P. GAVIN, *Principal.*

TORONTO TECHNICAL SCHOOLS

.....191..
Please admit
to Class
Subject
Year
A. C. McKAY,
Principal.

LONDON INDUSTRIAL AND ART SCHOOL
"Education for Efficiency"
King and Colborne Sts. - Phone 3800

STUDENT'S ADMISSION CARD

This will admit
to the following classes of the London Industrial & Art School.
1.
2.
3.
.....191..
The Instructors will admit students on the presentation of this card.

VII. CARDS SENT TO ABSENTEES
CENTRAL TECHNICAL SCHOOL
DAY CLASSES

149 College Street, Toronto.

191..

Dear

The Report of Class for the week ending shows that has been absent or late on the days indicated below. The success of a student depends, in great measure, on punctuality and regularity of attendance. May I ask for your co-operation in this matter?

Friday	Monday	Tuesday	Wednesday	Thursday

Yours very truly,

J. M. WARREN,

Assistant Principal.

OTTAWA COLLEGIATE INSTITUTE BOARD
INDUSTRIAL EVENING CLASSES

191..

DEAR SIR (OR MADAM)—

I find that you were absent from the While we recognize the fact that absence is sometimes unavoidable, yet regular attendance is so essential to good class work, and to the progress of the individual student, that we expect our students to make a special effort to attend regularly, and be present on time.

We are anxious that all the students now enrolled should complete the course, but in justice to those on the waiting list and to the work of the school, we cannot hold places for students who are absent from classes except for a sufficient reason.

The term certificates, upon which graduation diplomas will be based, can be granted only to those who attend 85 per cent. of the classes in the course. Kindly let me know the reason of your absence.

Yours faithfully,

W. W. NICHOL, *Principal.*

VIII. YEAR CARDS

YEAR CARD

EVENING CLASSES

TORONTO TECHNICAL SCHOOLS

This Certifies that M.....
has completed the course in the following :

.....
.....

Toronto,.....19....

.....Director

.....Principal

LONDON INDUSTRIAL & ART SCHOOL

Student's No;.....

"Education for Efficiency"

No

TERM CERTIFICATE—EVENING & SPECIAL CLASSES

This Certifies that.....
has completed the following work :

.....
.....

London.....

.....Principal

APPENDIX B

LIST OF BOOKS SUITABLE FOR REFERENCE LIBRARIES

APPENDIX B

Mathematics

Syllabus of Arithmetic and Mensuration. The Instructors	
Toronto Central Technical School Press.	
Industrial Arithmetic for Vocational Schools. Gardner and Murtland \$0 60	
D. C. Heath & Co.	
Technical Arithmetic and Geometry. C. T. Millis	
Methuen & Co.	
Shop Problems in Mathematics. Breckenridge, Mersereau and Moore..	1 00
Ginn & Co.	
Shop Mathematics. P. 1-2. Norris	2 50
McGraw, Hill Co.	
Applied Mathematics. Cobb	1 80
Ginn & Co.	
Vocational Mathematics. Dooley	1 00
D. C. Heath & Co.	
Industrial Mathematics. Marsh	2 00
Wiley & Sons.	
Practical Household Arithmetic of Daily Life	
Education Supply Association.	
Practical Mathematics. Claude Irwin Palmer each	75
Part I. Arithmetic with applications, pp. 136 (4½ in. by 6¾ in.)	
Part II. Geometry with applications, pp. 152.	
Part III. Algebra with applications, pp. 178. (Including a chapter on Graphics).	
Part IV. Trigonometry and Logarithms, pp. 147. (With 4-figure tables of logs and natural trigonometrical functions).	
McGraw Hill Co.	
A course in Practical Mathematics. F. W. Saxelby	2 25
Longmans, Green & Co.	
A manual of Practical Mathematics. Castle	1 50
Macmillans.	
Practical Mathematics for shop apprentices and others. G.T.R. Motive Power department	
Apprentice Text Book. G.T.R. Motive Power Department	
Practical Mathematics. A. G. Cracknell	1 10
Longmans, Green & Co.	
Wood Work Exercises treated Mathematically. Drury	60
G. Bell & Sons.	
Numerical Trigonometry. F. W. Mercer	2s. 6d.
Cambridge University Press.	
Practical Trigonometry. Playne & Fawdry	65
Arnold.	
Plane Surveying. Carhart	1 80
Ginn & Co.	

Plane Surveying. Tracy	\$2 70
Wiley & Sons.	
Field Engineering. Searless	3 00
Wiley & Sons.	
Logarithmic and Other Tables. Castle	15
Macmillans.	
Mining and Other Tables. Hatch & Valentine	1 40
Macmillan Co.	
Board of Education Mathematical Tables used in Examinations	
Wyman & Sons.	

Practical Geometry and Geometrical Drawing

First Stage, Practical Plane and Solid Geometry. G. F. Buons	
University Tutorial Press.	
Geometrical Drawing for Art Students. Morris	2s. 6d.
Longmans, Green & Co.	
Practical Plane and Solid Geometry. Morris & Husband	2s. 6d.
Longmans, Green & Co.	
Practical Plane and Solid Geometry for Elementary Students. J. Harrison.	60
Macmillans.	
Practical Geometry and Graphics. Low	7s. 6d.
Longmans, Green & Co.	

Applied Mechanics and Engineering

Applied Mechanics for Beginners. Duncan	50
Macmillan Co.	
Experimental Mechanics. Pullen	1 50
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APPENDIX C
INDUSTRIAL EDUCATION ACT, OF 1915

APPENDIX C

INDUSTRIAL, TECHNICAL, AND ART, SCHOOLS AND DEPARTMENTS

1. This Act may be cited as *The Industrial Education Act*. 3-4 Geo. V. c. 73, s. 1.

2. In this Act,

(a) "Board" shall mean and include a board of education, and a board of high school trustees;

(b) "Minister" shall mean Minister of Education;

(c) "Regulations" shall mean regulations made under the authority of *The Department of Education Act* or of this Act. 3-4 Geo. V. c. 73, s. 2.

3. This Act shall apply to all art, industrial and technical schools and courses, heretofore established under Acts of this Legislature respecting high schools and technical schools and in operation at the time of the passing of this Act; to the art, industrial or technical schools and courses established under this Act; and to agricultural and commercial high schools and high school courses heretofore or hereafter established under the Regulations. 3-4 Geo. V. c. 73, s. 3.

DAY

4. With the approval of the Minister a high school board or a board of education of any city, town or village, may provide for duly admitted pupils in the following classes of schools:

General Industrial

(a) General industrial schools and courses for instruction in such subjects as may form a basal preparation for the trades, including work-shop practice, with correlated drawing, English, practical mathematics and science, and the essential subjects of a good general education.

Special Industrial

(b) Special industrial schools and courses for instruction in the theoretical and practical work of particular trades carried on in the city, town or village, and, when deemed desirable, in the essential subjects of a good general education.

Technical

(c) Technical high schools and high school courses for instruction for minor directive positions in industrial establishments.

Co-operative Industrial

(d) Part-time co-operative industrial courses in which, under such conditions as may be agreed upon between the employer and the advisory industrial committee, apprentices, whether articulated or not, employed in the work-shops may receive in the day schools instruction bearing upon their trades; and pupils attending the day schools may receive practical instruction in the work-shops.

Art

- (e) Schools and courses for instruction in the fine and applied arts.

EVENING

- (f) Industrial, technical and art evening schools in which workmen and workwomen employed during the day may receive theoretical and practical instruction in their trades or callings.

Admission of Pupils

5.—(1) Pupils duly admitted under the Regulations to a high school may be admitted to a technical high school or high school course.

Industrial Schools

(2) Subject to the Regulations and on the report of the principal, approved by the advisory industrial committee, pupils of at least the standing of the fourth form of the public and separate schools may be admitted to a general or special industrial school or part-time co-operative industrial course or a school or course for instruction in the fine and applied arts.

Admission of Workmen and Workwomen

(3) Workmen or workwomen employed during the day may be admitted to an industrial, technical or art evening school or course subject to the Regulations and on the report of the principal, approved by the advisory industrial committee, that they are competent to receive instruction therein. 3-4 Geo. V. c. 73, s. 5.

Advisory Committee

Composition and Name

6.—(1) Every technical school established before the 21st March, 1911, and then in operation, and the schools mentioned in section 4, whether heretofore or hereafter established, shall be under the management and control of a committee composed of eight or twelve persons as the board may direct, the members of which shall be appointed by the board as follows:

(a) When the number of persons is eight.

(i) Four members of the board, including one representative of the board of public school trustees and one representative of the board of separate school trustees, if any;

(ii) Two persons, not members of the board, who are engaged as employees in the manufacturing or other industries carried on in the local municipality or in the county or district in which the school is situate; and

(iii) Two other persons, not members of the board, who are employers of labour or directors of companies employing labour in manufacturing or other industries carried on in the local municipality or in the county or district in which the school is situate:

(b) When the number of persons is twelve,

(i) Six members of the board, including one representative of the board of public school trustees and one representative of the board of separate school trustees, if any,

(ii) Three persons, not members of the board, who are engaged as employees in the manufacturing or other industries carried on in the local municipality or in the county or district in which the school is situate, and

(iii) Three other persons, not members of the board, who are employers of labour or directors of companies employing labour in manufacturing or other industries carried on in the local municipality or in the county or district in which the school is situate.

(2) The committee shall be known as the Advisory Industrial Committee.

Agricultural and Commercial Schools and Courses

ADVISORY COMMITTEE

Composition and Name

7.—(1) Where in accordance with the Regulations an agricultural or a commercial high school has been or is hereafter established or an agricultural or a commercial course is established in a high school or a continuation school, such a school or course shall be under the management and control of a committee composed of eight persons the members of which shall be appointed by the board as follows:—

(a) Four members of the board, including one representative of the board of public school trustees and one representative of the board of separate school trustees, if any;

(b) Four persons who are resident ratepayers of the local municipality or of the county or district in which the school is situate or the course is established who are not members of the board and who,

(i) In the case of an agricultural high school or ^{agricultural} commercial course are actually engaged in agricultural pursuits, or

(ii) In the case of a commercial high school or commercial course are actually engaged in commercial pursuits.

(2) The committee shall be known as the Advisory Agricultural Committee or the Advisory Commercial Committee, as the case may be.

(3) Subject to the regulations, pupils who have been duly admitted to a high school under sections 44 or 45 of *The High Schools Act* may be admitted to a commercial or agricultural high school or the commercial or agricultural courses of a high or continuation school.

(4) Subject to the regulations, the public school inspector and the principal of a high or continuation school may also admit to an agricultural high school or to the agricultural courses of a high or continuation school a pupil who has at least the standing of form 4 of the public and separate schools, but who does not hold a high school entrance certificate, and who is at least fourteen years of age.

ADVISORY COMMITTEES

Appointment and Tenure of Office

8.—(1) The first members of an advisory committee shall be appointed at the meeting of the board at which a school or course is established for which an advisory committee is to be appointed under this Act.

(2) The members appointed under subclause (i) of clause (a) of subsection 1 of section 6 and subclause (i) of clause (b) of section 6 and clause (a) of subsection 1 of section 7 shall hold office until the expiry of the period for which they were elected or appointed to the board.

(3) The term for which the other members of the committee shall respectively hold office shall be fixed by the board but shall not exceed three years.

Filling Vacancies

(4) The board, at its first meeting in each year after the establishment of the school or course, shall appoint a sufficient number of members from each class to fill the vacancies caused by the expiry of the term of office of members appointed from that class.

(5) Every vacancy upon a committee occasioned by death, removal or other cause shall be filled by the appointment by the Board of some person from the class in which the vacancy occurs, and every person so appointed shall hold office for the unexpired portion of the term of the member whose seat has become vacant.

Quorum

(6) The presence of a majority of the members constituting a committee shall be a quorum at any meeting, and a vote of the majority of such quorum shall be necessary to bind a committee.

Chairman Voting

(7) On every question other than the election of a chairman the chairman or presiding officer of the committee may vote with the other members of the committee, and any question on which there is an equality of votes shall be deemed to be negatived.

Present Members to Remain in Office

(8) The members of an advisory committee holding office on the 6th day of May, 1913, shall continue to hold office until their successors are appointed as provided by this Act. 3-4 Geo. V. c. 73, s. 8.

Co-opted Members

9.—(1) An advisory committee may, at a meeting which has been specially called for that purpose and of which notice has been given in writing to all the members appoint such additional members, hereinafter called co-opted members, as it may deem advisable, and members of the board may be so appointed; but

(a) In the case of an advisory industrial committee an equal number of the persons so appointed shall be chosen from each of the classes mentioned in subclauses (ii) and (iii) of clauses (a) and (b) of subsection 1 of section 6; and

(b) In all cases the members so appointed shall belong to the classes from which persons not members of the board may be appointed by the board to the committee.

(2) The term for which co-opted members of the committee shall respectively hold office shall be fixed by the committee, but shall not exceed three years.

Qualifications of Members

10. The members of a committee appointed under this Act, including co-opted members, shall be British subjects, and shall be persons who, in the judgment of the board, are specially competent to give advice and other assistance in the management of the school or course under the charge of the committee. 3-4 Geo. V. c. 73, s. 10.

Powers of Committees

11.—(1) Subject to the approval of the Minister and the board, every advisory committee shall have authority to provide a suitable site and building and suitable equipment or to arrange for conducting the school or course in a high, public, separate or continuation school building or other building in the municipality, and to prescribe courses of study and provide for examinations and diplomas.

(2) Subject to the approval of the board, the committee shall employ teachers and fix their salaries, report on every school or course under its charge, fix the fees payable by pupils in attendance, submit annually to the board at such date as the board may prescribe an estimate of the amount required to carry on the work of the school or course during the year, and generally do all other things necessary for carrying out the objects and intent of this Act with respect to any school or course under its management and control.

(3) The board shall not refuse its approval of any report of an advisory committee without having given the committee an opportunity to be heard before the board and before any committee thereof to which such report may be referred by its chairman or by another member of the advisory committee appointed for that purpose.

Officers of Advisory Committee

(4) The secretary and other officers of the Board shall be the officers of the advisory committee.

Provision for Cost of Establishment, Equipment and Maintenance of Schools and Courses

12.—(1) Subject to the Regulations the estimates of the committee of the cost of establishing, equipping and maintaining the school or course under its management and control, when and so far as they have been approved by the board, shall be included in its estimates submitted to the council of the municipality for the year.

(2) Subject to the Regulations, the cost of establishing and maintaining, and of making additions, alterations or permanent improvements to every school established under section 4 or under chapter 79 of the Acts passed in the 1st year of His Majesty's reign, shall be provided in the same manner as in the case of a High School. *See* 1 Geo. V. c. 79, s. 11.

Apportionment of Legislative Grant

13. Subject to the Regulations the Minister shall apportion all sums of money appropriated by this Legislature for the establishment and maintenance of schools or courses to which this Act applies.

Regulations

14. The Regulations may provide as to any class of schools or courses for the qualifications of teachers, the courses of study, the character of the site, accommodations, and equipment, the maximum and minimum fees that may be charged to pupils, and generally as to any matter relating to the conduct and efficiency of the schools and courses not herein expressly provided for.

Control of Certain Public and Separate School Courses

15. Subject to the Minister's approval where an advisory committee and the board of education or the board of public or separate school trustees so agree, evening courses in manual training and household science, art, agriculture or commerce under the charge of the Board shall thereafter be under the control and management of the advisory industrial, agricultural or commercial committee as the case may be. 3-4 Geo. V. c. 73, s. 15.

Establishment of Evening Courses in other Centres

16. Subject to the approval of the Minister an advisory committee may also establish and conduct special evening courses in any centre in the county outside of the district over which it has jurisdiction.

